

## Claims

1. (Currently Amended) A method comprising:

determining a power save status of a first station wherein said first station communicates via a shared-communications channel in accordance with a first modulation scheme; and

responsive to a determination that the first station is not in a power save state, enabling transmission protection at a second station via ~~said the~~ shared-communications channel ~~wherein said enabling is dependent on said power save status.~~

2. (Currently Amended) The method of claim 1 wherein ~~said~~ determining a power save status of a first station comprises:

transmitting one of a Request-to-Send frame, a Data frame, and a Null frame to ~~said the~~ first station via ~~said the~~ shared-communications channel in accordance with ~~said the~~ first modulation scheme; and

receiving one of an Acknowledgement frame and a Clear-to-Send frame from ~~said the~~ first station.

3. (Currently Amended) The method of claim 1 wherein ~~said~~ enabling transmission protection comprises broadcasting a management frame via ~~said the~~ shared-communications channel.

4. (Currently Amended) The method of claim 3 wherein ~~said the~~ management frame is one of:

- (i) a Beacon frame indicating that protection status is active; and
- (ii) a Probe-Response frame indicating that protection status is active.

5. (Currently Amended) The method of claim 3 wherein ~~said~~ the first modulation scheme is based on one of Barker modulation and Complementary Code Keying modulation.

6. (Currently Amended) A method comprising:

receiving a first frame from a station via a shared-communications channel wherein ~~said~~ the station communicates in accordance with a first modulation scheme;

determining whether the station is in power save mode; and

broadcasting an IEEE 802.11 Probe-Response frame via said shared-communications channel in response to ~~said~~ the receiving of the first frame;

wherein said IEEE 802.11 Probe-Response frame indicates that protection status is active.

7. (Currently Amended) The method of claim 6 wherein ~~said~~ the first modulation scheme is based on one of Barker modulation and Complementary Code Keying modulation.

8. (Currently Amended) A method comprising:

determining a power save status of a first station that communicates via a shared-communications channel in accordance with a first modulation scheme;

responsive to determining the power save status of the first station, alternately enabling and disabling transmission protection at ~~a~~ the first station ~~that communicates via a shared-communications channel in accordance with a first modulation scheme;~~

wherein ~~said~~ the first modulation scheme is undetectable to a second station that communicates via ~~said~~ the shared-communications channel in accordance with a second

modulation scheme ~~wherein the enabling or disabling of the transmission protection is associated with a determination of whether the first station is in a power save mode; and~~

wherein ~~said~~ the first modulation scheme and ~~said~~ the second modulation scheme are different from each other.

9. (Currently Amended) The method of claim 8 wherein ~~said~~ the enabling of transmission protection and ~~said~~ the disabling of transmission protection are periodic with respect to one of (i) frames transmitted and (ii) time.

10. (Currently Amended) The method of claim 8 wherein ~~said~~ the of transmission protection and ~~said~~ the disabling of transmission protection are sporadic with respect to one of (i) frames transmitted and (ii) time.

11. (Currently Amended) The method of claim 8 further comprising extending transmission protection for a first interval when receiving a first frame from ~~said~~ the second station while transmission protection is enabled, wherein ~~said~~ the first interval is measured in one of (i) time and (ii) frames.

12. (Currently Amended) The method of claim 8 further comprising activating transmission protection for a first interval when receiving a first frame from ~~said~~ the second station while transmission protection is disabled, wherein said first interval is measured in one of (i) time and (ii) frames.

13. (Currently Amended) The method of claim 8 wherein ~~said~~ the enabling of transmission protection comprises transmitting a first management frame via said shared-communications channel.

14. (Currently Amended) The method of claim 13 wherein ~~said~~ the first management frame is one of:

- (i) a Beacon frame indicating that protection status is active; and
- (ii) a Probe-Response frame indicating that protection status is active.

15. (Currently Amended) The method of claim 8:

wherein ~~said~~ the first modulation scheme is based on one of Barker modulation and Complementary Code Keying modulation; and

wherein ~~said~~ the second modulation scheme is based on Orthogonal Frequency Division Multiplexing modulation.

16. (Currently Amended) A method comprising:

transmitting a first frame comprising a duration field value to a first station via a shared-communications channel in accordance with a first modulation scheme;

receiving a second frame from a second station via ~~said~~ the shared-communications channel in accordance with a second modulation scheme during a time interval defined by ~~said~~ the duration field value;

determining whether the second station is in power save mode; and

receiving a third frame via ~~said~~ the shared-communications channel in accordance with said first modulation scheme after ~~said~~ the time interval;

wherein ~~said~~ the first modulation scheme is undetectable to ~~said~~ the second station; and

wherein ~~said~~ the first modulation scheme and ~~said~~ the second modulation scheme are different from each other.

17. (Currently Amended) The method of claim 16:

wherein ~~said~~ the first modulation scheme is based on Orthogonal Frequency Division Multiplexing modulation; and

wherein ~~said~~ the second modulation scheme is based on one of Barker modulation and Complementary Code Keying modulation.

18. (Currently Amended) The method of claim 16 wherein ~~said~~ the transmitting is one of (i) periodic and (ii) sporadic.

19. (Currently Amended) The method of claim 16 wherein ~~said~~ the frame is a Clear-to-Send frame and ~~said~~ the first station is the sender of ~~said~~ the frame.

20. (Currently Amended) An apparatus comprising:

a processor for determining a power save status of a first station wherein ~~said~~ the first station communicates via a shared-communications channel in accordance with a first modulation scheme; and

a transmitter for enabling transmission protection at a second station via ~~said the~~ shared-communications channel wherein ~~said the~~ enabling of transmission protection is ~~dependent on~~ said responsive to a determination of the power save status.

21. (Currently Amended) The apparatus of claim 20 wherein ~~said the~~ enabling of transmission protection comprises broadcasting a management frame via ~~said the~~ shared-communications channel.

22. (Currently Amended) The apparatus of claim 21 wherein ~~said the~~ management frame is one of:

- (i) a Beacon frame indicating that protection status is active; and
- (ii) a Probe-Response frame indicating that protection status is active.

23. (Currently Amended) The apparatus of claim 21 wherein ~~said the~~ first modulation scheme is based on one of Barker modulation and Complementary Code Keying modulation.

24. (Currently Amended) An apparatus comprising:

a receiver configured to receive ~~for receiving~~ a first frame from a station via a shared-communications channel wherein ~~said the~~ station communicates in accordance with a first modulation scheme and wherein the receiver is configured to determine ~~for determining~~ whether the station is in power save mode; and

a transmitter for broadcasting an IEEE 802.11 Probe-Response frame via ~~said~~ the shared-communications channel in response to ~~said receiving~~ determining whether the station is in power save mode;

wherein ~~said~~ the IEEE 802.11 Probe-Response frame indicates that a transmission protection status is active.

25. (Currently Amended) The apparatus of claim 24 wherein ~~said~~ the first modulation scheme is based on one of Barker modulation and Complementary Code Keying modulation.

26. (Currently Amended) An apparatus comprising:

a receiver for receiving in accordance with a first modulation scheme and a second modulation scheme via a shared-communications channel; and

a transmitter for alternately enabling and disabling transmission protection at a first station responsive to determining that the first station is in power save mode, wherein the first station communicates via a shared-communications channel in accordance with a first modulation scheme;

wherein ~~said~~ the first modulation scheme is undetectable to a second station that communicates via ~~said~~ the shared-communications channel in accordance with a second modulation scheme; and

wherein ~~said~~ the first modulation scheme and ~~said~~ the second modulation scheme are different from each other.

27. (Currently Amended) The apparatus of claim 26 wherein ~~said~~ the enabling of transmission protection and ~~said~~ the disabling of transmission protection are periodic with respect to one of (i) frames transmitted and (ii) time.

28. (Currently Amended) The apparatus of claim 26 wherein ~~said~~ the enabling of transmission protection and ~~said~~ the disabling of transmission protection are sporadic with respect to one of (i) frames transmitted and (ii) time.

29. (Currently Amended) The apparatus of claim 26 further comprising extending transmission protection for a first interval when receiving a first frame from ~~said~~ the second station while transmission protection is enabled, wherein ~~said~~ the first interval is measured in one of (i) time and (ii) frames.

30. (Currently Amended) The apparatus of claim 26 further comprising activating protection for a first interval ~~when~~ in response to receiving a first frame from ~~said~~ the second station while transmission protection is disabled, wherein ~~said~~ the first interval is measured in one of (i) time and (ii) frames.

31. (Currently Amended) The apparatus of claim 26 wherein ~~said~~ the enabling of transmission protection comprises transmitting a first management frame via ~~said~~ the shared-communications channel.



32. (Currently Amended) The apparatus of claim 31 wherein ~~said~~ the first management frame is one of:

- (i) a Beacon frame indicating that protection status is active; and
- (ii) a Probe-Response frame indicating that protection status is active.

33. (Currently Amended) The apparatus of claim 26:

wherein ~~said~~ the first modulation scheme is based on one of Barker modulation and Complementary Code Keying modulation; and

wherein ~~said~~ the second modulation scheme is based on Orthogonal Frequency Division Multiplexing modulation.

34. (Currently Amended) An apparatus comprising:

a transmitter for transmitting a first frame comprising a duration field value to a first station via a shared-communications channel in accordance with a first modulation scheme and for determining whether the second station is in power save mode; and

a receiver for:

receiving a second frame from a second station via ~~said~~ the shared-communications channel in accordance with a second modulation scheme during a time interval defined by ~~said~~ the duration field value; and

receiving a third frame via said shared-communications channel in accordance with ~~said~~ the first modulation scheme after ~~said~~ the time interval;

wherein ~~said~~ the first modulation scheme is undetectable to ~~said~~ the second station; and

wherein ~~said~~ the first modulation scheme and ~~said~~ the second modulation scheme are different from each other.

35. (Currently Amended) The apparatus of claim 34:

wherein ~~said~~ the first modulation scheme is based on Orthogonal Frequency Division Multiplexing modulation; and

wherein ~~said~~ the second modulation scheme is based on one of Barker modulation and Complementary Code Keying modulation.

36. (Currently Amended) The apparatus of claim 34 wherein ~~said~~ the transmitting is one of (i) periodic and (ii) sporadic.

37. (Currently Amended) The apparatus of claim 34 wherein ~~said~~ the frame is a Clear-to-Send frame and ~~said~~ the first station is the sender of ~~said~~ the frame.